



# Master of Technology in Enterprise Business Analytics

Shortcut▼

## Overview

Next Intake	Aug 2023 (Full-Time), Jan 2024 (Part-Time)
Duration	<ul style="list-style-type: none"><li>• Full-time 1 year (2 semesters)</li><li>• Part-time 2 years (4 semesters)</li></ul>
Application Timeline	<p>Admissions into the MTech programme is competitive. Eligible students will be offered admissions on a first-come first-served basis. The average application processing period would take between 6 - 8 weeks. Applications for August 2023 admission into the full-time MTech EBAC should be submitted before 30 April 2023. Applications for January 2024 admissions into the part-time MTech EBAC should be submitted before 15 October 2023. <i>*Applicants based in Singapore are to take the test in NUS-ISS. Applicants based overseas can take the test online. If you apply after the above dates and are accepted into the programme, you will be offered advanced admission into the following academic year (August 2024/January 2025). The dates above are subjected to changes.</i></p>
Entrance Test	<p>Online: 16 March, 22 March, 31 March, 12 April and 20 April 2023 Face-to-Face: 22 March, 12 April and 20 April 2023* <i>*Applicants based in Singapore are to take the test in NUS-ISS. Applicants based overseas can take the test online.</i> <i>The dates above are subjected to changes.</i></p>
Download Brochure	English
Info-session	<a href="#">Click here for dates</a>
Enquiry	<a href="mailto:iss-admissions@nus.edu.sg">iss-admissions@nus.edu.sg</a>

The NUS Master of Technology in Enterprise Business Analytics programme (MTech EBAC) is specifically designed to meet the industry demand for data scientists who can help organisations achieve improved business outcomes through data insights. It is best suited for professionals seeking to focus on the following - methodical data exploration and visualisation, diagnostic analytics, predictive modelling using statistical and machine learning techniques, text analytics, recommender systems, and big data engineering, etc.

The MTech EBAC programme prepares students for specialist, expert and leadership roles in enterprise business analytics to create business value through strategic use of data, analytics, models and frontline tools.

By contributing to more effective utilisation and management of data analytics, you can help your enterprise to focus on big decisions so that they gain better predictive ability that can translate to higher profits. Helping enterprises to build better and more effective models will lead to improved outcomes such as more attractive pricing, higher levels of customer care, better market segmentation, and highly-efficient inventory management and finally profit maximisation.

### Recognition:

- Top student is awarded the IBM Medal and Book Prize
- Best Project Prize

### Graduates of the programme will be capable of undertaking tasks such as:

- Discovering insights from data
- Applying concepts and techniques to solve major business problems
- Designing and customizing marketing campaigns through efficient targeting
- Analysing sales channels
- Optimising the marketing mix of their organisations
- Improving decision-making to increase returns on investments for their organisations
- Predicting the future profitability of their organisations
- Automate production fault detection in manufacturing using predictive modelling

### Learning outcomes:

- Help enterprises move towards a stronger emphasis on computer tools and statistical and machine learning techniques to develop high-performance analytics capability
- Translate massive and complex unstructured data (e.g. text) into insights
- Produce predictive models to solve a broad range of problems across various business functions and units
- Contribute to the development of more effective business strategies and plans for sustainable growth and competitive advantage

### Scholarship:

- **IMDA Post Graduate Scholarship:** The SG:D Scholarship (Postgraduate) is an industry scholarship that empowers students pursuing postgraduate studies in specialised ICM areas such as Artificial Intelligence, Cybersecurity, Analytics, Immersive Media, and Digital Content Creation. Scholarship details and eligibility criteria can be found [here](#).

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## Modules

MTech EBAC candidates must successfully complete the following course components to be awarded the degree:

- **Fundamental** - Complete 2 Graduate Certificates
- **Specialist** - Complete 2 of 4 Graduate Certificates

### Fundamental Analytics Areas

### Analytics Project Management and Delivery

Students will be equipped with practice-oriented data analytics skills and knowledge in managing analytics project. Participants will be equipped with essential skillsets to understand analytics processes and best practices, to manage data and resources, to understand structure of analytics solution, to perform data visualisation, to present insights via compelling data storytelling, and to ensure successful implementation of analytics project. **Courses:**

- Statistics for Business II
- Data Storytelling
- Data Management for Analytics
- Managing Business Analytics Projects

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## Core Analytics Techniques

Students will learn the foundation skills to understand, design and solve analytics problems in the industry involving structured and unstructured data. It is a course which prepares the participants to embark upon the journey to become a data scientist in due course. **Courses:**

- Data Analytics Process and Best Practices II
- Statistics Bootcamp II
- Predictive Analytics – Insights of Trends and Irregularities
- Text Analytics

## Specialist Analytics Areas

### Customer Analytics

Students will be equipped with the skills to manage the customer data and build analytics solutions for customer relationship management. The course will enable them to apply techniques for targeted customer marketing, to reduce churn, increase customer satisfaction and loyalty and increase profitability.

**Courses:**

- Customer Analytics
- Advanced Customer Analytics
- Campaign Analytics

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### Big Data Processing

Students will learn various aspects of data engineering while building resilient distributed datasets. Participants will learn to apply key practices, identify multiple data sources appraised against their business value, design the right storage, and implement proper access model(s). Finally, participants will build a scalable data pipeline solution composed of pluggable component architecture, based on the combination of requirements in a vendor/technology agnostic manner. Participants will familiarize themselves on working with Spark platform along with additional focus on query and streaming libraries.

**Courses:**

- Big Data Engineering for Analytics
- Recommender Systems
- Processing Big Data for Analytics

## Practical Language Processing

Students will be taught advanced skills in practical language processing. This includes fundamental text processing, text analytics, deep learning techniques and their application in sentiment mining and chatbots development. **Courses:**

- Text Analytics
- New Media and Sentiment Mining
- Text Processing using Machine Learning
- Conversational UIs

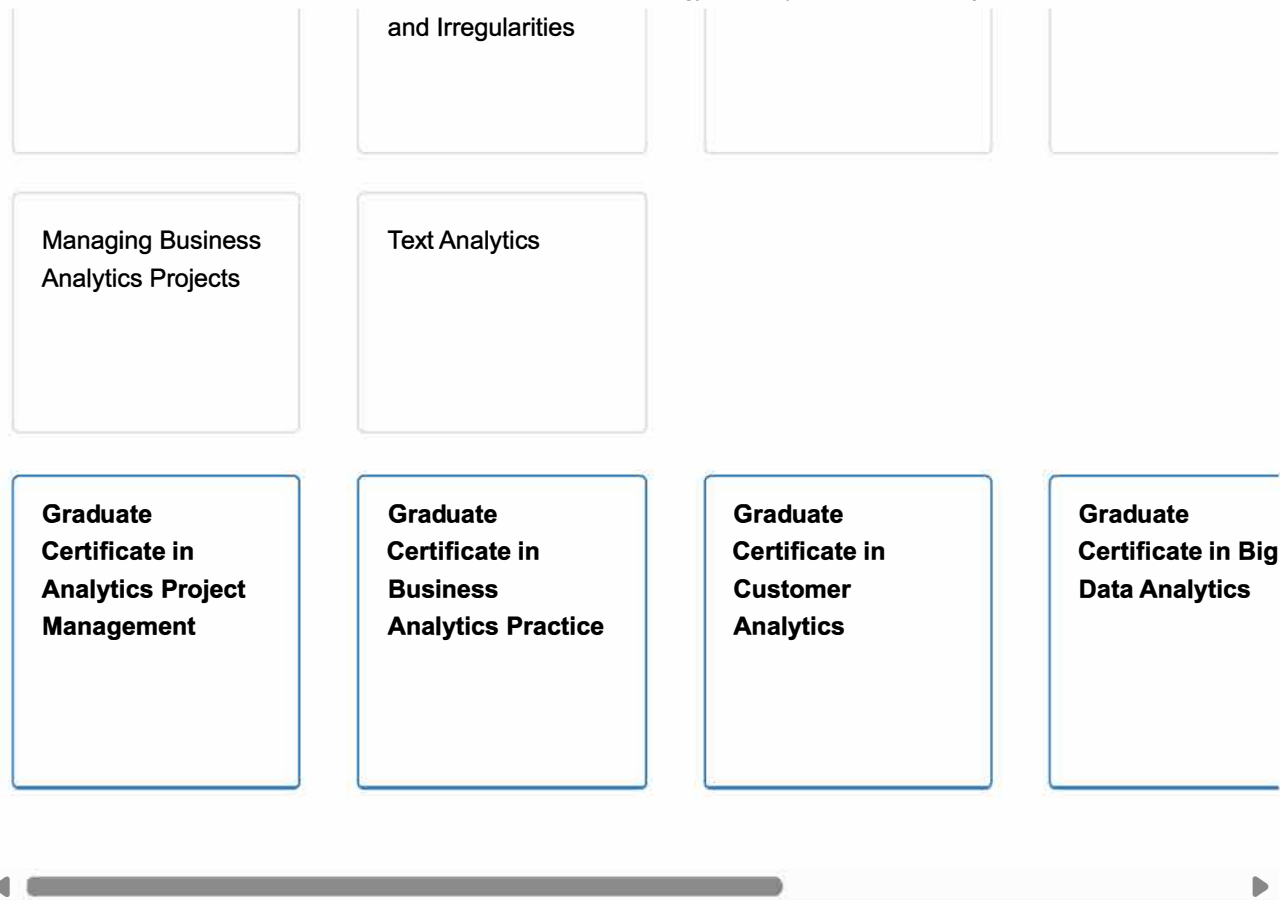
## Advanced Predictive Modelling Techniques

Students who complete this certificate will have skills in advanced predictive, prescriptive & forecasting techniques applicable in the areas of health, government and many other domains. The topics include advanced predictive and forecasting techniques, survival analysis, health analytics, experimental design techniques, econometric forecasting, mathematical optimization methods etc. **Courses:**

- Complex Predictive Modelling & Forecasting
- Product & Pricing Analytics
- Analytics for Commercial Excellence

## Learning Journey

Analytics Project Management and Delivery	Core Analytics Techniques	Customer Analytics	Big Data Processing
Statistics for Business II	Statistics Bootcamp II	Customer Analytics	Big Data Engineering for Analytics
Data Story Telling	Data Analytics Process and Best Practice II	Advanced Customer Analytics	Recommender Systems
Data Management for Analytics	Predictive Analytics – Insights of Trends	Campaign Analytics	Processing Big Data for Analytics



## Capstone Project & Internships

### A central element of the MTech programme is the project module.

Student projects for MTech EBAC students will include intense full time engagement of 5 months with companies for full time students. For part-time students the capstone engagement will be for 7-12 months. Students are allowed to conduct their project as a team-based internship if desired. The expected commitment for the project is 30 man-days per team member.

### Objectives

- Practise new technical skills in a real industry environment
- Apply tools, methods and techniques learnt

### Learning outcomes:

- Apply business analytics methods and techniques to solve identified business problems
- Plan and execute business analytics projects by understanding business problems, identifying appropriate analytics techniques, and then applying data exploration, model building, testing and validating of results

Read more on Internship & Placements

## Timetable & Exams

### Timetable & Exams for Full-time Students

Year	Curriculum		Assessment
Year 1 Semester 1 (Jul - Nov)	<b>EBA5001: Analytics Project Management (compulsory)</b> <ul style="list-style-type: none"><li>Statistics for Business II</li><li>Data Storytelling</li><li>Data Management for Analytics</li><li>Managing Business Analytics Projects</li></ul> <b>EBA5002: Business Analytics Practice (compulsory)</b> <ul style="list-style-type: none"><li>Data Analytics Process and Best Practice II</li><li>Statistics Bootcamp II</li><li>Predictive Analytics – Insights of Trends and Irregularities</li><li>Text Analytics</li></ul>		<ul style="list-style-type: none"><li>Continuous assessments</li><li>Open book written exams</li></ul>
Year 1 Semester 2 (Jan - Mar)	Choose <b>ONE</b>		<ul style="list-style-type: none"><li>Continuous assessments</li></ul>
	<b>EBA5003: Customer Analytics</b> <ul style="list-style-type: none"><li>Customer Analytics</li><li>Advanced Customer Analytics</li><li>Campaign Analytics</li></ul>	<b>EBA5006: Big Data Analytics</b> <ul style="list-style-type: none"><li>Big Data Engineering for Analytics</li><li>Recommender Systems</li><li>Processing Big Data for Analytics</li></ul>	<ul style="list-style-type: none"><li>Open book written exams</li></ul>
	Choose <b>ONE</b>		<ul style="list-style-type: none"><li>Continuous assessments</li></ul>
	<b>EBA5004: Practical Language Processing</b> <ul style="list-style-type: none"><li>New Media and Sentiment Mining</li><li>Text Processing Using Machine Learning</li><li>Conversational UIs</li></ul>	<b>EBA5005: Specialised Predictive Modelling and Forecasting</b> <ul style="list-style-type: none"><li>Complex Predictive Modelling &amp; Forecasting</li><li>Product &amp; Pricing Analytics</li><li>Analytics for Commercial Excellence</li></ul>	<ul style="list-style-type: none"><li>Open book written exams</li></ul>
Year 1 Semester 2 (Mar - Jul/Aug)	<b>Team-based Internship or Off-site Project</b>  Hands-on project with external organisation		<ul style="list-style-type: none"><li>Project, presentation &amp; report</li></ul>

### Timetable & Exams for Part-time Students

Year	Curriculum	Assessment
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<b>Year 1 Semester 1</b> (Jan - May)	<b>EBA5001: Analytics Project Management (compulsory)</b> <ul style="list-style-type: none"> <li>Statistics for Business II</li> <li>Data Storytelling</li> <li>Data Management for Analytics</li> <li>Managing Business Analytics Projects</li> </ul>		<ul style="list-style-type: none"> <li>Continuous assessments</li> <li>Open book written exams</li> </ul>
<b>Year 1 Semester 2</b> (Jul - Nov)	<b>EBA5002: Business Analytics Practice (compulsory)</b> <ul style="list-style-type: none"> <li>Data Analytics Process and Best Practice II</li> <li>Statistics Bootcamp II</li> <li>Predictive Analytics – Insights of Trends and Irregularities</li> <li>Text Analytics</li> </ul>		<ul style="list-style-type: none"> <li>Continuous assessments</li> <li>Open book written exams</li> </ul>
<b>Year 2 Semester 1</b> (Jan - May)	Choose <b>ONE</b>		<ul style="list-style-type: none"> <li>Continuous assessments</li> <li>Open book written exams</li> </ul>
	<b>EBA5003: Customer Analytics</b> <ul style="list-style-type: none"> <li>Customer Analytics</li> <li>Advanced Customer Analytics</li> <li>Campaign Analytics</li> </ul>	<b>EBA5006: Big Data Analytics</b> <ul style="list-style-type: none"> <li>Big Data Engineering for Analytics</li> <li>Recommender Systems</li> <li>Processing Big Data for Analytics</li> </ul>	
<b>Year 2 Semester 2</b> (Jul - Nov)	Choose <b>ONE</b>		<ul style="list-style-type: none"> <li>Continuous assessments</li> <li>Open book written exams</li> </ul>
	<b>EBA5004: Practical Language Processing</b> <ul style="list-style-type: none"> <li>New Media and Sentiment Mining</li> <li>Text Processing Using Machine Learning</li> <li>Conversational UIs</li> </ul>	<b>EBA5005: Specialised Predictive Modelling and Forecasting</b> <ul style="list-style-type: none"> <li>Complex Predictive Modelling &amp; Forecasting</li> <li>Product &amp; Pricing Analytics</li> <li>Analytics for Commercial Excellence</li> </ul>	
<b>Year 2 Semester 1-2</b> (Mar - Sep)	<b>Team-based Internship or Off-site Project</b>  Hands-on project with external organisation		<ul style="list-style-type: none"> <li>Project, presentation &amp; report</li> </ul>

Students are evaluated through a combination of course work, project work and examinations. All students are required to complete a three-hour examination for each fundamental and specialist module taken.

## Fees

### From 1 January 2023 onwards

Fee Component	International Students	Singapore Citizens	Singapore Permanent Residents
Full Tuition Fees	S\$49,460.00 to S\$53,000.00	S\$49,460.00 to S\$53,000.00	S\$49,460.00 to S\$53,000.00
NUS-ISS Subsidy	-	S\$8,552.00 to S\$9,260.00	S\$8,552.00 to S\$9,260.00
Nett Tuition Fees	S\$49,460.00 to S\$53,000.00	S\$40,908.00 to S\$43,740.00	S\$40,908.00 to S\$43,740.00
8% GST on Nett Tuition Fees	S\$3,956.80 to S\$4,240.00	S\$3,272.64 to S\$3,499.20	S\$3,272.64 to S\$3,499.20
Total Nett Tuition Fees, including GST	S\$53,416.80 to S\$57,240.00	S\$44,180.64 to S\$47,239.20	S\$44,180.64 to S\$47,239.20
NUS-ISS Study Award for AY2022/AY2023 (See T&Cs on Study Award below)	-	Up to S\$20,000.00	Up to S\$10,000.00
Total Nett Tuition Fees payable after Study Award, including GST	S\$53,416.80 to S\$57,240.00	S\$24,180.64 to S\$27,239.20	S\$34,180.64 to S\$37,239.20

**Note:**

1. The current NUS-ISS Subsidy is a subsidy of 20% of the component course fees. The NUS-ISS Subsidy is subjected to change without prior notice. There is no subsidy for the Practice Module fees or the Capstone fees.
2. The exact tuition fees will be calculated based on the student's selection of the Graduate Certificates.
3. The miscellaneous fees payable are set out here.
4. From 1 January 2023, GST will be increased to 8%.
5. From 1 January 2024, GST will be increased to 9%.

### Terms & Conditions of the NUS-ISS MTech Study Award (as of 15 March 2023):

1. The NUS-ISS MTech Study Award will be given to qualifying Singaporeans and Singapore Permanent Residents matriculated in AY2023/2024 and AY2024/2025 into the unfunded MTech EBAC, MTech IS and MTech SE degrees as through-train students.
2. The NUS-ISS MTech Study Award may be amended at any time at the discretion of NUS-ISS.
3. The quantum of the Study Award will be (up to) S\$20,000 for Singaporeans, subject to the T&Cs described here.
4. The quantum of the Study Award will be (up to) S\$10,000 for Singapore Permanent Residents, subject to the T&Cs described here.
5. The Study Awards will be divided evenly and given out progressively over the semesters of study, i.e., for part-time students, the award will be given out over four semesters, and for full-time students, the award will be given out over two semesters. The semesters must run consecutively unless approved by NUS-ISS.
6. Within each semester, the Study Award may not exceed the fees paid by the respective student in that semester.



7. Students who are entitled to course module waivers will still receive the waiver, and need not pay course fees for those course modules.
8. The Study Award will be on top of and applied after any other subsidies in course module fees.
9. Where students have been waived fees at the start of the programme, the Study Award will be pro-rated as a simple proportion of the remaining fees.
  1. For the pro-ration calculation, we will use the maximum fees payable for the respective programme, before GST and misc fees.
  2. For example,
    1. the maximum fees for an EBAC student is \$53,390
    2. Say that student has taken two 3-day component courses which are allowed as waivers, totalling \$5,400 in waived fees
    3. The remainder of the fees is now  $\$53,390 - \$5,400 = \$47,990$
    4. The Study Award will be prorated as  $\$20,000 \times (47,990/53,390) = \$17,977.15$
10. Students need not choose to apply, or to accept the Study Award. The Study Award will be given automatically to all entitled students when they are matriculated into the respective MTech programme.
11. Students may choose to decline the Study Award, in which case, they should inform NUS-ISS when they accept entry into the programme.
12. Students who are already in receipt of full scholarships or sponsorship support are not eligible for the Study Awards. Those who are in receipt of partial scholarship/sponsorship shall have proportionally reduced study awards.
13. Students who withdraw from the programme or are terminated from the programme before graduation will not be eligible for the Study Award in future.
14. The Study Award may be terminated at any time if, in the opinion of NUS-ISS, the scholarship holder's progress or behaviour is deemed unsatisfactory.

## Admission & Application

### Applicants must possess the following pre-requisites:

- Bachelor's degree preferably in Mathematics, Statistics, Econometrics, Management Science, Operational Research, Science or Engineering and a grade point average of at least B
- Proficiency in the English Language (written and spoken)\*
- Have passed an entrance test
  - NUS-ISS may, at its discretion, accept **GRE general test** in lieu of NUS-ISS entrance test in genuine cases e.g. a candidate lives in a country where NUS-ISS does not administer entrance tests or candidate had valid reasons that prevented him/her from attending the NUS-ISS entrance test when it was administered
  - A sample of the entrance test can be found **here**
- Preferably two years relevant working experience
  - IT, engineering and scientific professionals would make ideal candidates
  - Candidates with highly relevant degrees in Mathematics, Statistics, Econometrics, Management Science, Operational Research or similar, with consistently good academic records may be granted a work experience waiver
- Have received a favourable assessment at admissions interview conducted by NUS-ISS

### **\*English Language Proficiency**

- *Applicants who graduated from universities where English is not the medium of instruction should submit TOEFL (Test of English as a Foreign Language) or IELTS (International English Language Testing System) score as*

evidence of their proficiency in the English language.

<b>TOEFL</b>	Paper-based test (580) Computer-based test (237) Internet-based test (85)
<b>IELTS</b>	Result of 6.0

- Institution code of NUS-ISS for TOEFL is 2432
- TOEFL and IELTS are only valid for five years after the test and the validity should not expire before the beginning of the application period for the coursework programme.
- NUS-ISS accepts TOEFL iBT Special Home Edition test scores.

## How to Apply

All applicants are required to submit an online application for our graduate coursework programme (through-train).

**Step 1:** You can refer to our detailed **step-by-step guide** on how to complete the online application.

**Step 2:** It will take you about 30 minutes or more to complete your application. You will need the softcopies of the supporting documents for your online application. Click **here** for the supporting documents to be uploaded and additional information required.

**Step 3:** You can proceed to **apply online**. Remember to **upload all the required supporting documents** under the “**Documents Upload**” section **before** you do the online submission. You can refer to our **FAQ**.

**Step 4:** Please ensure you **submit** your online application(s) and make **online payment** for the application fee (non-refundable) of **S\$50.00** per application (*inclusive of prevailing GST*).

### Important:

1. Applications that are **incomplete**, including missing supporting document(s), **will not be processed**.
2. Applicants who are found to have given inaccurate or false information will be required to withdraw from the programme.
3. All payments for application fee are **non-refundable**.
4. Please note that the University has not engaged any external agencies to undertake student recruitment on its behalf. Candidates interested in our graduate programmes are advised to apply directly to the University and not through any agents. Candidates who apply through agents will not have any added advantage in gaining admission and the University reserves the right to reject such applications without giving reasons.

## Career Pathways

Find your fit with new opened doors

There is opportunity in Singapore in almost all industries which are rapidly working towards digital transformation and data analytics sits in the heart of it. What you learn in terms of analytics skills is not as important as what you do with it. It is the attitude and the ability to learn from mistakes, and to contribute back to the company that you work for that is likely to make more of a difference than specific analytics skills.

There are two main paths for advancement in analytics - either technical or managerial. Technical means you continue to deepen your technical area in a domain (Finance, Government, Manufacturing, Telecom, Transportation, Technology companies etc.) and you become an expert data scientist in those areas. The other is managerial, where you can focus on designing solutions for clients (internal or external) to achieve their organisation goals in the areas of profit maximisation, automation or digitisation.

Our internship companies often tell us that if we can give them good students as interns, it is very likely they will get a job offer at the end of the internship.

As an MTech EBAC graduate, you will be prepared for specialist, expert and leadership roles in enterprise business analytics to create business value through strategic use of data, visualisation methods, modelling techniques and frontline tools.

## Career Prospects

- Business Analytics Manager
- Data Scientist and Architect
- Business Analyst
- Optimisation Strategy Consultant
- Business Intelligence and Performance Management Consultant
- Enterprise Intelligence Manager
- Market Intelligence Analyst
- CRM Data Analyst
- Risk Analyst
- Marketing Analyst
- Big Data Analyst

## MTech alumni are pursuing their careers at these global organisations:

- |   |                                |
|---|--------------------------------|
| • Accenture                                   | • Murex                        |
| • Creative Technology                         | • NCS                          |
| • DBS Bank                                    | • NEC Asia Pacific             |
| • Defence Science & Technology Agency         | • NTUC                         |
| • Deutsche Bank AG                            | • OCBC Bank                    |
| • Fuji Xerox Asia Pacific                     | • Revolution Analytics         |
| • HP Singapore                                | • Singapore Telecommunications |
| • IBM Singapore                               | • Standard Chartered Bank      |
| • Infocomm Development Authority of Singapore | • Starhub                      |
| • Inland Revenue Authority of Singapore       | • ST Electronics               |
| • Jurong Port                                 | • Tata Consultancy Services    |
| • Microsoft                                   |                                |

The NUS-ISS Career Services Office helps students to match jobs based on their skills and experience. There will be bi-yearly Career Fairs held for students and graduates to network with employers. However, successful employment will depend on the employers.

The average starting salary of an analytics professional depends on the degree and your previous working experience. For fresh graduates with no work experience, the starting salary ranges from S\$4,000 to S\$4,500. Graduates with more than 3 years of work experience can expect a starting pay of S\$6,000 and above.

The most important skill is to get the job done and be persistent. You need to be broad-based and the technology does not matter.

### You can get some salary benchmarks from these sites:

- Salary.sg
- Hays.com Salary Guide
- Kelly Services Salary Guide

## Ang Rui Xiang, Singapore

Analysis ExecutiveMINDEF

Master of Technology in Enterprise Business Analytics, (

*"I decided to enrol in the MTech EBAC programme as the skill applicable in various job markets where analytics is increasing and utilised. The skills I picked up from the programme allowed how I can assist in pushing work processes in going from the c phase to the predictive analytic phase and beyond "*

## Maximilian Jackson Yap, Singapore

Data Science & Analytics ConsultantDataSpark

Master of Technology in Enterprise Business Analytics (I  
Class of 2015

*"The course content was superbly well thought out with many . The lecturers were extremely knowledgeable and they brought of industry experience and academia experience. This really h learnt into perspective "*

## Ian Lo, Singapore

Solution Architecture AnalystMavenWire Pte Ltd

Master of Technology in Enterprise Business Analytics (I  
Class of 2016

*"ISS is known to be practical and industry-based, having lectur from the industry. This makes the lessons and lectures releva working environment. Being a part-time student, I appreciate ti are conducted on weekends, which allows me to focus on my*

## Ang Rui Xiang, Singapore

Analysis ExecutiveMINDEF

Master of Technology in Enterprise Business Analytics, (

"I decided to enrol in the MTech EBAC programme as the skill applicable in various job markets where analytics is increasing and utilised. The skills I picked up from the programme allowed me how I can assist in pushing work processes in going from the current state to the future state."

## Maximilian Jackson Yap, Singapore

Data Science & Analytics ConsultantDataSpark

Master of Technology in Enterprise Business Analytics (I)  
Class of 2015

"The course content was superbly well thought out with many practical examples. The lecturers were extremely knowledgeable and they brought in a lot of industry experience and academia experience. This really helped me to learn into perspective."

## Discover Life with Us



### Our Students

Building up a portfolio for work and life.

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### Internship & Placements

Get a headstart with actual work experience under your belt.

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### Career Services

Receive job placement opportunities with partner organisations.

[Find Out More](#)



### Teaching Staff

Learn from our teaching staff with more than 20 years of industry experience.

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More than one Google Analytics scripts are registered. Please verify your pages and templates.